IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

Inventor:	Jurgen Schmidt
Application No.:	10/563,709
Filed:	January 6, 2006
Title:	Method and Apparatus for Decoding a Data Stream In Audio Video Streaming Systems
Examiner:	Mohammad N. Rahman
Art Unit:	2161

APPEAL BRIEF

May It Please The Honorable Board:

Appellants reinstate an appeal in accordance with 37 CFR 41.31 in response to the Rejection, dated October 27, 2009, of claims 1-12 of the above-identified application. The fee of five hundred forty dollars ($540.00) for filing this Brief pursuant to 37 CFR 41.20(b)(2) has already been applied in the previous appeal. Enclosed is a single copy of this Brief.

Appellants do not request an oral hearing.

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Signature _____ Date: _____

I. REAL PARTY IN INTEREST

The real party in interest of Application Serial No. 10/563,709 is the Assignee of record:

Thomson Licensing

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France

II. RELATED APPEALS AND INTERFERENCES

An appeal was first filed regarding Application Serial No. 10/563,709 on November 5, 2008. This appeal was withdrawn by the Examiner in an Office Action dated January 30, 2009. A reinstatement of appeal was filed in response to this Office Action on May 21, 2009. This reinstatement of appeal was withdrawn by the Examiner in an Office Action dated October 27, 2009. The present appeal is currently the second reinstatement of appeal and third appeal filed in this Application to respond to the Office Action dated October 27, 2009.

III. STATUS OF THE CLAIMS

Claims 1-12 are rejected and the rejection of claims 1-12 is appealed.

IV. STATUS OF AMENDMENTS

All amendments were entered and are reflected in the claims included in Appendix I.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 provides a method for decoding a data stream containing a first and second substream (Fig. 1, page 4, lines 1-5). The first substream contains first and second multimedia data packets (Fig. 1, page 4, lines 5-12) and the second substream contains control information (Fig. 2, page 4, lines 17-22). The multimedia data packets contain an indication of the time when to be presented (Fig. 2, page 4, lines 17-22) and are decoded prior to their indicated presentation time (Page 4, lines 22-24). First, second and third control data is extracted from the control information of the second substream. The first control data are suitable for defining buffer size to be allocated (Page 5, lines 4-20). The second control data are suitable for

defining one or more second multimedia data packets to be buffered (Page 5, lines 4-20). The third control data are suitable for defining a mode for buffering the second multimedia data packets (Page 5, lines 4-20). Buffer size is allocated according to the first control data in a buffer (Page 5, lines 29-30). The first decoded multimedia data packets are stored in the buffer (Page 5, lines 14-18). One or more multimedia data packets are stored according to the second control data in the buffer (Page 5, lines 30-34). Depending on the third control data, either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or some or all of the first decoded multimedia data packets in the buffer are replaced (Page 6, lines 1-5).

Dependent claim 2 includes all the features of claim 1, along with a third control data defining one of a plurality of operation modes (Page 6, lines 1-2). In a first mode, buffering of multimedia data packets is performed when the value of the first control data changes (Page 6, lines 7-10). In a second and third mode, the second control data are valid to specify the multimedia data packets to be buffered (Page 6, lines 11-12). In the second mode, the multimedia data packets replace the buffer contents and in the third mode, the multimedia data packets are appended to the buffer contents (Page 6, lines 14-25).

Dependent claim 3 includes all the features of claim 2, along with a third mode having two variations. In the first variation, the buffering of multimedia data packets stops when the buffer is full (Page 6, lines 27-34). In the second variation, previously buffered data may be overwritten when the buffer is full (Page 7, lines 1-9).

Dependent claim 4 includes all the features of claims 1, along with a method being utilized in an instance of a processing node. The first control data (Length) defines the allocated buffer size at node creation time (Page 6, lines 27-34).

Dependent claim 5 includes all the features of claims 1, along with labels being attached to the buffered first and other multimedia data packets, and the packets may be accessed through their respective label (Page 7, lines 1-14).

Dependent claim 6 includes all the features of claims 5, along with label attached to the buffered data packets containing an index relative to the latest received data packet (Page 7, lines 16-21).

Dependent claim 7 includes all the features of claim 1, along with the first substream containing audio data and the second substream contains a description of the presentation (Page 8, lines 10-23).

Independent claim 8 provides an apparatus for decoding a data stream containing a first and second substream (Fig. 1, page 4, lines 1-5). The first substream contains first and second multimedia data packets (Fig. 1, page 4, lines 5-12) and the second substream contains control information where the multimedia data packets contain an indication of the time when to be presented (Fig. 2, page 4, lines 17-22). The multimedia data packets are decoded prior to their indicated presentation time (Page 4, lines 22-24). The first, second and third control data is extracted from the control information of the second substream. The first control data is suitable for defining allocation of buffer size (Page 5, lines 4-20). The second control data is suitable for defining one or more second multimedia data packets to be buffered (Page 5, lines 4-20). The third control data is suitable for defining a mode for buffering the second multimedia data packets (Page 5, lines 4-20). Buffer size according to the first control data is allocated in a buffer (Page 5, lines 29-30). The first decoded multimedia data packets are stored in the buffer (Page 5, lines 14-18). One or more multimedia data packets are stored according to the second control data in the buffer (Page 5, lines 30-34). Depending on the third control data, either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or some or all of the first decoded multimedia data packets in the buffer are replaced (Page 6, lines 1-5).

Dependent claim 9 includes all the features of claim 8, including attaching labels to the buffered multimedia data packets, and means for accessing, retrieving or deleting the packets through their respective label (Page 7, lines 1-21).

Dependent claim 10 includes all the features of claim 8, along with the data stream being an MPEG-4 compliant data stream (Page 8, lines 10-24).

Dependent claim 11 includes all the features of claim 1, along with replacing the stored first decoded multimedia packets with the second multimedia data packets further comprises the step of clearing the buffer before storing the second multimedia data packets (Page 7, lines 1-9).

Dependent claim 12 includes all the features of claims 8, along with the third control data defining one of a plurality of operation modes (Page 6, lines 1-2). In a first mode, buffering of multimedia data packets is performed when the value of the first control data changes (Page 6, lines 7-10). In a second and third mode, the second control data are valid to specify the multimedia data packets to be buffered (Page 6, lines 11-12). In the second mode, the multimedia data packets replace the buffer contents and in the third mode, the multimedia data packets are appended to the buffer contents (Page 6, lines 14-25).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being obvious over Kim et al. (US Patent No. 7,224,730) in view of Luken (US Patent Publication No. 2004/0109502).

VII. ARGUMENT

Overview of the Cited References

Kim describes a system that decodes robustly encoded video bitstreams. The system can reconstruct a predictive-coded video object plane (P-VOP) from a standard motion vector and the previous frame; from a redundant motion vector and a frame prior to the previous frame; or from both. This permits the decoder to display a frame based on a reconstructed VOP in the presence of unfavorable environmental conditions, such as interference, delays, and the like, which could otherwise corrupt a previous frame that is used as a reference by a standard decoder, such as a standard MPEG-4 decoder. (See col. 2, lines 59-67 and col. 3, lines 1-3)

Luken describes a system for converting a MPEG-4 (mp4) binary file into an Extensible MPEG-4 Textual (XMT) file. At least one intermediary structured document representing the mp4 binary file is generated. A translator is configured to input the intermediate document and generate an XMT structured document. An XMT serializer is then used to create the XMT file based on the XMT structured document. (See paragraphs [0005] through [0008])

Rejection of claims 1-12 under 35 U.S.C. 103(a)

Reversal of the rejection of claims 1-12 under 35 U.S.C. § 103(a) as being obvious over Kim et al (US Patent No. 7,224,730) in view of Luken (US Patent Publication No. 2004/0109502) is requested because the Examiner makes crucial misinterpretations of the references. The rejection erroneously states that claims 1-12 are obvious over Kim in view of Luken.

The failure of an asserted combination to teach or suggest each and every feature of a claim remains fatal to an obviousness rejection under 35 U.S.C. § 103. Section 2143.03 of the MPEP requires the "consideration" of every claim feature in an obviousness determination. To render a claim unpatentable, however, the Office must do more than merely "consider" each and every feature for this claim. Instead, the asserted combination of the patents must also teach or suggest *each and every claim feature. See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art). Indeed, as the Board of Patent Appeal and Interferences has recently confirmed, a proper obviousness determination requires that an Examiner make "a searching comparison of the claimed invention - *including all its limitations* - with the teaching of the prior art." *See In re Wada and Murphy*, Appeal 2007-3733, *citing In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis in original). "If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious" (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

CLAIMS 1-7

Independent claim 1 provides a method for decoding a data stream containing a first and second substream. The first substream contains first and second multimedia data packets and the second substream contains control information. The multimedia data packets contain an indication of the time when to be presented and are decoded prior to their indicated presentation time. First, second and third control data is extracted from the control information of the second substream. The first control data is suitable for defining allocation of buffer size. The second control data is suitable for defining one or more second multimedia data packets to be buffered. The third control data is suitable for defining a mode for buffering the second multimedia data packets. Buffer size according to the first control data is allocated in a buffer. The first decoded multimedia data packets are stored in the buffer. One or more multimedia data packets are stored according to the second control data in the buffer. Depending on the third control data, either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or some or all of the first decoded multimedia data packets in the buffer are replaced.

The Office Action asserts that Kim describes "first control data suitable for buffer size to be allocated, second control data suitable for defining one or more multimedia packets to be buffered, and third control data suitable for defining a mode for buffering" as recited in claim 1 of the present arrangement. Applicant respectfully disagrees.

Kim describes an error concealment method and device for video data, including robust encoding and corresponding decoding. The method and device described by Kim is useful for reducing error propagation in predictive encoding/decoding of data, and in particular video data (col. 1, lines 34-37). Specifically, the system of Kim uses redundant motion compensation with different reference image data, so that when a reference image is not available for prediction, it is still possible to perform a prediction based on the other reference images and on the redundant motion vectors. The second, redundant reference image and the corresponding second redundant motion vectors may be adaptively selected (col. 15, lines 55-65), in which case a reference to the selected reconstructed frame is stored in a user data video packet (col. 16, lines 51-56). Kim

describes that the reference "corresponds to a time lag value" or to "a number that corresponds to a count of frames back in the sequence," and suggests generally that other values are possible, without providing more examples or considerations for such "other values." The user data video packet is identified as such by a user data start code (see col. 16, lines 65-67 and col. 17, lines 1-3).

Kim neither teaches nor suggests "extracting from said control information of the second substream first, second and third control data wherein the first control data are suitable for buffer size to be allocated, the second control data are suitable for defining one or more multimedia packets to be buffered, and the third control data are suitable for defining a mode for buffering" as recited in claim 1 of the present arrangement. Col. 13, lines 4-21 of Kim, cited in the Office Action, describes encoding a portion of a video bitstream to include a redundant motion vector that references motion relative to a VOP (Video Object Plane) in a previous frame. For performing the process asynchronously as a batch process (i.e. not in real time), the encoded video data are stored in a buffer until the processing is complete. This describes a common feature of batch processing, specifically that the data processed in a batch process must be available at the time of processing, and therefore needs to be buffered or stored. Thus, in the portion of Kim cited by the Examiner, and elsewhere, Kim does not teach or suggest that "the first control data are suitable for buffer size to be allocated, the second control data are suitable for defining one or more multimedia packets to be buffered, and the third control data are suitable for defining a mode for buffering." Instead, col. 13, lines 14-15, in conjunction with Fig. 11, discusses that a redundant reference image and corresponding second redundant motion vectors may be adaptively selected. The remainder of the paragraph cited by the Examiner in col. 13 discusses a first state (see Fig. 9) in which a sequence of video frames is received from a video data source.

Col. 3, lines 20-41, another portion of Kim cited in the Office Action, describes a VOP decoder that includes a first memory configured to store a reconstructed VOP from a second frame, a second memory configured to store a reconstructed VOP from a third frame, where the third frame is prior to the second frame, and two motion decoders and a motion compensator configured to reconstruct a VOP at least in part from information provided by at least one of the

first motion decoder and the second motion decoder. Specifically, the decoder stores two reconstructed frames, each of which may serve as reference for predicting a current frame, so that it is suitable for decoding video data that were encoded. This is also not the same as "the first control data are suitable for buffer size to be allocated, the second control data are suitable for defining one or more multimedia packets to be buffered, and the third control data are suitable for defining a mode for buffering."

Col. 15, line 55 through col. 18, line 61 of Kim describes another embodiment where the redundant reference frame can be adaptively selected. As shown in the aforementioned section of Kim and Figs. 5 and 6, a fixed relationship exists between a reference frame and a current frame. For example, Fig. 5 shows that each frame k refers to previous frame k-1 and previous frame k-2. Similarly, Fig. 6 shows that each frame k refers to previous frame k-1 as well as previous frame k-3. There is no need to include information indicating that a reference frame be buffered, since a fixed reference pattern is already used. Thus, the reference frame that is to be stored is already known. A prior reference frame and motion vector are adaptively selected and a reference to the selected frame is stored in a user data packet (Fig. 11). However, while this approach suggests that control data exists in the data stream indicating a reference frame, this control data points to a reference video frame, and not to multimedia data packets as described by the present claimed arrangement. The system described in Kim, contrary to the present claimed arrangement, does not provide that "the first control data are suitable for buffer size to be allocated, the second control data are suitable for defining one or more multimedia packets to be buffered, and the third control data are suitable for defining a mode for buffering." Kim does not operate on a data packet level, but instead on an application level. Specifically, Kim operates on the level of video frames. "[F]rames or VOPs are divided into multiple video packets (VP) (col. 17, line 35).

From the aforementioned paragraphs, it can be concluded that Kim does not teach or suggest different types of control data or how control data is allocated. Kim simply mentions that a frame is buffered. In addition, multimedia packets are not buffered in Kim, only frames. Kim also does not describe different modes for buffering. Furthermore, Kim does not describe data types other than motion-compensated video data, and Kim is only applicable to data types

that use predictive coding. Predictive coding is not required for the present arrangement. Thus, Kim neither teaches nor suggests "extracting from said control information first, second and third control data wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second multimedia data packets" as recited in claim 1 of the present arrangement.

The Office Action concedes that Kim neither teaches nor suggests "storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 1 of the present arrangement. However, the Office Action asserts that Luken describes the aforementioned features. Applicant respectfully disagrees.

Luken, like Kim, neither teaches nor suggests "storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 1 of the present arrangement. Luken describes a conversion from a binary coded MPEG-4 format into an extensible MPEG-4 Textual (XMT) format (paragraph [0005]). A reverse operation is also briefly discussed (paragraph [0004]), but operation of this reverse operation is not clear from the disclosure. In converting from mp4 to XMT, a first translating operation, an intermediary structured document, and a second translating operation are used. The first and second operations are also denoted as decoding and reorganization (paragraph [0237]). Though the stream descriptors used in MPEG-4 and the general streaming structure of mp4 format and XMT format are described in detail, including a mention of audio data and scene description (paragraphs [0173] and [0174]), Luken only describes a format translation. The translation refers to BIFS commands that are called elements, such as an "insert" element, "delete" element, or a "replace" element. However, no BIFS commands are executed, no input or output of a BIFS command is mentioned, and no actual insertion, deletion

or replacement operation is performed. Instead, Luken only describes that BIFS command elements are contained in par-child elements (paragraph [0158]). These par-child elements are "par" elements, where a "par" element is a child element of the Body element (paragraph [0156]) which is a main element of an XMT-A file (paragraph [0152]). Other than the aforementioned instances of BIFS commands, Luken provides no additional disclosure regarding the purpose of BIFS commands. Thus, the input or output of a BIFS command is unknown and unclear.

With respect to format conversion, Luken describes that a step of "Create a new XMT-A 'Insert' element" (paragraph [1636]) is part of a "Convert an mp4bifs InsertNode Element into XMT-A Elements" process (paragraph [1634]). The latter process is the 2nd step in a superordinate "Convert mp4bifs CommandFrame Element into XMT-A Elements" process (paragraphs [1619] and [1623]), which in turn is the 6th step of a "Create par elements for BIFS commands" procedure (paragraphs [1599] and [1606]). This procedure is initiated as the 5th step in a "Creation of an XMT-A xml Document Based on the Pair of Intermediate xml Documents" process (paragraphs [1439] and [1445]). The XMT-A format is one part of the "Extensible MPEG-4 Textual (XMT) format" (paragraph [0147]). Luken does not provide actual insertion, deletion or replacement operations as in the present claimed arrangement. Thus, Luken, like Kim, neither teaches nor suggests "storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 1 of the present arrangement.

A combination of Kim and Luken, similar to the individual systems, also neither teaches nor suggests "extracting from said control information first, second and third control data wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second multimedia data packets" or "storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some

or all of the first decoded multimedia data packets in the buffer" as recited in claim 1 of the present arrangement. The combination of Kim and Luken would result in a system that reduces error propagation when encoding or decoding data and the ability to convert data from an MPEG-4 format to an extensible MPEG-4 textual format. The combination of Kim and Luken is not relevant for and would not be able to carry out "extracting ... first, second and third control data" that defines buffer size, data packets to be buffered, or defining mode for buffering the data packets. The combination of Kim and Luken also fails to show that multimedia packets are stored "according to the second control data in the buffer" where "the second multimedia data packets" may be "appended to the first decoded multimedia data packets ... or replace some or all of the first decoded multimedia data packets in the buffer." Thus, the combination of Kim and Luken, similar to the individual systems, neither teaches nor suggests "extracting from said control information first, second and third control data wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second multimedia data packets" or "storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 1 of the present arrangement. Since Kim or Luken taken alone, or in combination, do not teach or suggest each of the limitations of the claimed invention, as described above, the Examiner has failed to construct a prima facie obviousness rejection. Therefore, it is respectfully submitted that the rejection of claim 1 is overcome and should be reversed.

Claims 2-7 are dependent on claim 1 and are considered patentable for the reasons set forth above regarding claim 1. Therefore, it is respectfully submitted that the rejection of claims 2-7 is overcome and should be reversed.

CLAIMS 8-12

Independent claim 8 provides an apparatus for decoding a data stream. The data stream contains a first and a second substream. The first substream contains first and second

multimedia data packets. The second substream contains control information. The multimedia data packets contain an indication of the time when to be presented and are decoded prior to their indicated presentation time. The first and second multimedia data packets are buffered. Control information of the first, second and third control data are extracted from the second substream. The first control data is suitable for defining the buffer size to be allocated. The second control data is suitable for defining one or more second multimedia data packets to be buffered. The third control data is suitable for defining a mode for buffering the second multimedia data packets. In a buffer, buffer size is allocated according to the first control data. The first decoded multimedia data packets are stored in the buffer. One or more multimedia data packets may be stored according to the second control data in the buffer. Depending on the third control data, either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer or some or all of the first decoded multimedia data packets in the buffer are replaced.

Kim neither teaches nor suggests "means for extracting from said control information of the second substream first, second and third control data, wherein the first control data are suitable for defining buffer size to be allocated,-the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second a multimedia data packets" as recited in claim 8 of the present arrangement. Col. 13, lines 4-21 of Kim, cited in the Office Action, describes encoding a portion of a video bitstream to include a redundant motion vector that references motion relative to a VOP (Video Object Plane) in a previous frame. For performing the process asynchronously as a batch process (i.e. not in real time), the encoded video data are stored in a buffer until the processing is complete. This describes a common feature of batch processing, specifically that the data processed in a batch process must be available at the time of processing, and therefore needs to be buffered or stored. Thus, in the portion of Kim cited by the Examiner, and elsewhere, Kim does not teach or suggest that "the first control data are suitable for defining buffer size to be allocated,-the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second a multimedia data packets" Instead, col. 13, lines 14-15, in conjunction with Fig. 11, discusses that a redundant reference image and corresponding

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Furthermore, Col. 15, line 55 through col. 18, line 61 of Kim describes another embodiment where the redundant reference frame can be adaptively selected. As shown in the aforementioned section of Kim and Figs. 5 and 6, a fixed relationship exists between a reference frame and a current frame. For example, Fig. 5 shows that each frame k refers to previous frame k-1 and previous frame k-2. Similarly, Fig. 6 shows that each frame k refers to previous frame k-1 as well as previous frame k-3. There is no need to include information indicating that a reference frame be buffered, since a fixed reference pattern is already used. Thus, the reference frame that is to be stored is already known. A prior reference frame and motion vector are adaptively selected and a reference to the selected frame is stored in a user data packet (Fig. 11). However, while this approach suggests that control data exists in the data stream indicating a reference frame, this control data points to a reference video frame, and not to multimedia data packets as described by the present claimed arrangement. The system described in Kim, contrary to the present claimed arrangement, does not provide that "the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second a multimedia data packets" Kim does not operate on a data packet level, but instead on an application level. Specifically, Kim operates on the level of video frames. "[F]rames or VOPs are divided into multiple video packets (VP) (col. 17, line 35).

From the aforementioned paragraphs, it can be concluded that Kim does not teach or suggest different types of control data or how control data is allocated. Kim simply mentions that a frame is buffered. In addition, multimedia packets are not buffered in Kim, only frames. Kim also does not describe different modes for buffering. Furthermore, Kim does not describe data types other than motion-compensated video data, and Kim is only applicable to data types that use predictive coding. Predictive coding is not required for the present arrangement. Thus, Kim neither teaches nor suggests "means for extracting from said control information of the second substream first, second and third control data, wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second a multimedia data packets" as recited in claim 8 of the present arrangement.

The Office Action concedes that Kim neither teaches nor suggests "means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present arrangement. However, the Office Action asserts that Luken describes the aforementioned features. Applicant respectfully disagrees.

Luken, like Kim, neither teaches nor suggests "means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present arrangement. Luken describes a conversion from a binary coded MPEG-4 format into an extensible MPEG-4 Textual (XMT) format (paragraph [0005]). A reverse operation is also briefly discussed (paragraph [0004]), but operation of this reverse operation is not clear from the disclosure. In converting from mp4 to XMT, a first translating operation, an intermediary structured document, and a second translating

operation are used. The first and second operations are also denoted as decoding and reorganization (paragraph [0237]). Though the stream descriptors used in MPEG-4 and the general streaming structure of mp4 format and XMT format are described in detail, including a mention of audio data and scene description (paragraphs [0173] and [0174]), Luken only describes a format translation. The translation refers to BIFS commands that are called elements, such as an "insert" element, "delete" element, or a "replace" element. However, no BIFS commands are executed, no input or output of a BIFS command is mentioned, and no actual insertion, deletion or replacement operation is performed. Instead, Luken only describes that BIFS command elements are contained in par-child elements (paragraph [0158]). These par-child elements are "par" elements, where a "par" element is a child element of the Body element (paragraph [0156]) which is a main element of an XMT-A file (paragraph [0152]). Other than the aforementioned instances of BIFS commands, Luken provides no additional disclosure regarding the purpose of BIFS commands. Thus, the input or output of a BIFS command is unknown and unclear.

With respect to format conversion, Luken describes that a step of "Create a new XMT-A 'Insert' element" (paragraph [1636]) is part of a "Convert an mp4bifs InsertNode Element into XMT-A Elements" process (paragraph [1634]). The latter process is the 2nd step in a superordinate "Convert mp4bifs CommandFrame Element into XMT-A Elements" process (paragraphs [1619] and [1623]), which in turn is the 6th step of a "Create par elements for BIFS commands" procedure (paragraphs [1599] and [1606]). This procedure is initiated as the 5th step in a "Creation of an XMT-A xml Document Based on the Pair of Intermediate xml Documents" process (paragraphs [1439] and [1445]). The XMT-A format is one part of the "Extensible MPEG-4 Textual (XMT) format" (paragraph [0147]). Luken does not provide actual insertion, deletion or replacement operations as in the present claimed arrangement. Thus, Luken, like Kim, neither teaches nor suggests "means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present arrangement.

A combination of Kim and Luken, similar to the individual systems, also neither teaches nor suggests "means for extracting from said control information of the second substream first, second and third control data, wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second a multimedia data packets" or suggests "means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present arrangement. The combination of Kim and Luken would result in a system that reduces error propagation when encoding or decoding data and the ability to convert data from an MPEG-4 format to an extensible MPEG-4 textual format. The combination of Kim and Luken is not relevant for and would not be able to carry out "extracting ... first, second and third control data" that defines buffer size, data packets to be buffered, or defining mode for buffering the data packets. The combination of Kim and Luken also fails to show that multimedia packets are stored "according to the second control data in the buffer" where "the second multimedia data packets" may be "appended to the first decoded multimedia data packets ... or replace some or all of the first decoded multimedia data packets in the buffer." Thus, the combination of Kim and Luken, similar to the individual systems, neither teaches nor suggests "means for extracting from said control information of the second substream first, second and third control data, wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second a multimedia data packets" or suggests "means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present arrangement. Since Kim or Luken taken alone, or in combination, do not teach or suggest each of the limitations of the claimed invention, as described above, the

Examiner has failed to construct a prima facie obviousness rejection. Therefore, it is respectfully submitted that the rejection of claim 8 is overcome and should be reversed.

Claims 9-12 are dependent on claim 8 and are considered patentable for the reasons discussed above with respect to claim 8. Therefore, it is respectfully submitted that the rejection of claims 9-12 is overcome and should be reversed.

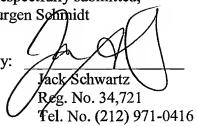
VIII CONCLUSION

The combination of Kim and Luken neither teaches nor suggests "extracting from said control information first, second and third control data wherein the first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered, and the third control data are suitable for defining a mode for buffering the second multimedia data packets" or "storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 1 of the present arrangement.

The present appeal is currently the second reinstatement of appeal and third appeal filed in this Application. This third Appeal Brief responds to the Office Action dated October 27, 2009. After the filing of each previous Appeal Brief, the appeals were withdrawn and prosecution reopened with a new Office Action citing new art. The current claims have now been subject to three different searches. Preparation of each appeal brief has been time consuming and costly for the applicant. In fairness to the applicant, we respectfully request that this appeal be allowed to proceed or the application allowed.

Accordingly it is respectfully submitted that the rejection of claims 1-12 should be reversed.

Respectfully submitted,
Jurgen Schmidt

By: 
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APPENDIX I - APPEALED CLAIMS

1. (Rejected) Method for decoding a data stream, containing a first and a second substream, the first substream containing first and second multimedia data packets and the second substream containing control information, wherein the multimedia data packets contain an indication of the time when to be presented and are decoded prior to their indicated presentation time, the method comprising the steps of:

extracting from said control information of the second substream first, second and third control data wherein

the first control data are suitable for defining buffer size to be allocated,

the second control data are suitable for defining one or more second multimedia data packets to be buffered, and

the third control data are suitable for defining a mode for buffering the second multimedia data packets;

allocating, in a buffer, buffer size according to the first control data (Length);

storing the first decoded multimedia data packets in the buffer; and

storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer.

2. (Rejected) Method according to claim 1, wherein the third control data defines one of a plurality of operation modes, wherein in a first mode buffering of multimedia data packets is performed when the value of the first control data changes, and in a second and third mode the second control data are valid for specifying the multimedia data packets to be buffered, wherein in the second mode the multimedia data packets replace the buffer contents and in the third mode the multimedia data packets are appended to the buffer contents.

3. (Rejected) Method according to claim 2, wherein the third mode has two variations, wherein in the first variation the buffering of multimedia data packets stops when the buffer is full, and in the second variation previously buffered data may be overwritten when the buffer is

full.

4. (Rejected) Method according to claim 1, wherein the method is utilized in an instance of a processing node and wherein the first control data defines the allocated buffer size at node creation time.

5. (Rejected) Method according to claim 1, wherein labels are attached to the buffered first and other multimedia data packets, and the packets may be accessed through their respective label.

6. (Rejected) Method according to the claim 5, wherein a label attached to the buffered data packets contains an index relative to the latest received data packet.

7. (Rejected) Method according to claim 1, wherein the first substream contains audio data and the second substream contains a description of the presentation.

8. (Rejected) Apparatus for decoding a data stream, the data stream containing a first and a second substream, the first substream containing first and second multimedia data packets and the second substream containing control information, wherein the multimedia data packets contain an indication of the time when to be presented and are decoded prior to their indicated presentation time, and wherein the first and second multimedia data packets are buffered, comprising

buffering means for said buffering of the first and the second multimedia data packets;

means for extracting from said control information of the second substream first, second and third control data, wherein the first control data are suitable for defining buffer size to be allocated,

the second control data are suitable for defining one or more second multimedia data packets to be buffered, and

the third control data are suitable for defining a mode for buffering the second a multimedia data packets;

means for allocating, in the buffer, buffer size according to the first control data;

means for storing the first decoded multimedia data packets in the buffer; and

means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer.

9. (Rejected) Apparatus according to claim 8, further comprising means for attaching labels to the buffered multimedia data packets, and means for accessing, retrieving or deleting the packets through their respective label.

10. (Rejected) Apparatus according to claim 8, wherein the data stream is an MPEG-4 compliant data stream.

11. (Rejected) Method according to claim 1, wherein replacing the stored first decoded multimedia packets with the second multimedia data packets further comprises the step of clearing the buffer before storing the second multimedia data packets.

12. (Rejected) Apparatus according to claim 8, wherein the third control data defines one of a plurality of operation modes, wherein in a first mode buffering of multimedia data packets is performed when the value of the first control data changes, and in a second and third mode the second control data are valid for specifying the multimedia data packets to be buffered, wherein in the second mode the multimedia data packets replace the buffer contents and in the third mode the multimedia data packets are appended to the buffer contents.

APPENDIX II - EVIDENCE

Applicant does not rely on any additional evidence other than the arguments submitted hereinabove.

APPENDIX III - RELATED PROCEEDINGS

An appeal was first filed regarding Application Serial No. 10/563,709 on November 5, 2008. This appeal was withdrawn by the Examiner in an Office Action dated January 30, 2009. A reinstatement of appeal was filed in response to this Office Action on May 21, 2009. This reinstatement of appeal was withdrawn by the Examiner in an Office Action dated October 27, 2009. The present appeal is currently the second reinstatement of appeal and third appeal filed in this Application to respond to the Office Action dated October 27, 2009.

APPENDIX IV - TABLE OF CASES

APPENDIX V - LIST OF REFERENCES

U.S. Pub. No.	Pub. Date	102(e) Date	Inventors
7,224,730	May 29, 2007		Kim et al.
2004/0109502	June 10, 2004		Luken

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